Office Action Summary

In the Office Action mailed June 16, 2005, claims 1-30 were pending in the application.

The drawings were objected to because Fig. 1 must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 C.F.R. 1.121(d). The drawings were further objected to because Figs. 8A, 8B, and 8C should be labeled consistent with the specification, for a better understanding of the drawings.

Claims 1, 11, 21, and 27 were rejected under 35 U.S.C. 102(e) as being anticipated by Ludtke (hereinafter "Ludtke"), U.S. Pat. No. 6,763,391.

Claims 2-4, 12-14, and 22 were rejected under 35 U.S.C. 103(a) as being unpatentable over Ludtke in view of *Universal Host Controller Interface (UHCI) Design Guide,* Revision 1.1 by Intel Corporation (hereinafter "Intel").

Claims 10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ludtke in view of Brief, et al. (hereinafter "Brief"), U.S. Pat. No. 6,205,501.

Claims 5-9, 15-19, 23-26, and 28-30 are objected to as being dependent on a rejected base claim, but would be allowable if written in independent form including all the limitations of the base claim and any intervening claims.

Objections to drawings

Figures 1 and 8 have been amended as required by Examiner.

35 U.S.C Section 102 Rejections

Claims 1, 11, 21, and 27 were rejected under 35 U.S.C. 102(e) as being anticipated by Ludtke. The Office Action further noted that Applicant's arguments filed May 16, 2005, regarding the 35 U.S.C. 102(e) rejection of claims 1, 11, 21, and 27 had been fully considered, but they were not persuasive. Applicant respectfully submits that the rejection is inapposite because claims 1, 11, 21, and 27 are patentable over Ludtke.

Ludtke teaches a system for managing data transmissions between a sourcing device and one or more listening devices to cooperatively avoid, resolve, and minimize conflicts. (see Ludtke, col. 7, lines 61-63). The system taught by Ludtke performs this

function by monitoring the available bandwidth on a signal line, such as a IEEE 1394-1995 signal line. (see Ludtke, col. 8, lines 60-62). The management of data transmissions involves three basic transactions between a requesting device (such as digital VCR 44 in Fig. 3 of Ludtke) and a sourcing device (such as tuner 40 in Fig. 3 of Ludtke) – (1) a request to initiate delivery of a data stream from a sourcing device to a requesting device; (2) a request to terminate an existing data stream from a sourcing device to a requesting device; and (3) a "registration" where the devices listening on a particular IEEE 1394-1995 source plug register their bandwidth handling capabilities with the sourcing device.

When requesting the initiation of delivery of a data stream, **a requesting device signals the sourcing device**. (see Ludtke, col. 7, lines 63-67). The sourcing device then determines the amount of bandwidth available on the signal line. (see Ludtke, col. 7, lines 65-67). If there is sufficient bandwidth, the sourcing device fulfils the request. (see Ludtke, col. 8, lines 19-21). Otherwise, if there is insufficient bandwidth, the sourcing device examines the contents of the request command from the requesting device to determine how to either service or reject the request. (see Ludtke, col. 8, lines 1-18 and col. 4, line 49-col. 5, line 9).

Once the service is initiated, **the requesting device can request the termination of a data stream by sending a signal to the source device**. (see Ludtke, col. 8, lines 34-38). Once signaled, the source device examines the contents of the signal from the requesting device to determine how to terminate the data stream. (see Ludtke, col. 9, lines 35-60). The data stream is then terminated, either to the requesting device alone, or to the entire plug. (see Ludtke, col. 9, lines 41-46).

In order to prevent the accidental overloading of devices on the IEEE 1394-1995 signal line, Ludtke teaches a system wherein all the devices on the line are required to register with the sourcing device. (see Ludtke, col. 11, lines 56-61). When registering with the sourcing device, **the listening device "specifies its bandwidth capabilities" to the sourcing device**. (see Ludtke, col. 11, lines 61-63).

These transactions are the extent of the system taught in Ludtke. Note that each of these transactions involves an asynchronous request/registration signal from the requesting/listening device, which the sourcing device responds to as the signal is

received. **Nothing in Ludkte teaches a system where a work item is removed, but the resources consumed by the work item are not reclaimed until the system processes a coherency signal which is generated independently from the work item.**

In contrast, claim 1 of the instant application includes the limitations of "removing a work item of a plurality of work items from an enabled expansion bus schedule data structure;" "generating a coherency signal independent of said work item utilizing an expansion bus host controller in response to removing said work item from said enabled expansion bus schedule data structure;" and "reclaiming resources assigned to said work item whenever said coherency signal is generated."

Accordingly, Applicant respectfully submits that claim 1 is in condition for allowance. Independent claims 11, 21, and 27 include limitations similar to those in claim 1. As a result, since claim 1 is not anticipated by Ludtke, claims 11, 21, and 27 are not anticipated by Ludtke. Claims 11, 21, and 27 are therefore in condition for allowance.

35 U.S.C Section 103 Rejections

Claims 2-4, 12-14, and 22 were rejected under 35 U.S.C. 103(a) as being unpatentable over Ludtke in view of Intel. Applicant respectfully asserts that claims 2-4, 12-14, and 22 are not obvious under 35 U.S.C. § 103(a).

Claims 2-4 depend from independent claim 1, thereby including all the limitations of claim 1. Claim 1 includes the limitations "removing a work item of a plurality of work items from an enabled expansion bus schedule data structure;" "generating a coherency signal independent of said work item utilizing an expansion bus host controller in response to removing said work item from said enabled expansion bus schedule data structure;" and "reclaiming resources assigned to said work item whenever said coherency signal is generated." Nothing in Ludtke or Intel, alone or in combination, teaches these limitations. Ludtke teaches a system in which command frames are communicated from a requesting/listening device to a sourcing device in order to cause the sourcing device to perform one of a limited set of actions: initiating a data stream, terminating a data stream, or registering the capabilities of the device (see Ludtke, col. 4,

line 24-col. 7, line 40), while Intel teaches a host controller interface which implements a Universal Serial Bus (USB) Host Controller. (see Intel, page 1, paragraph 1).

Because claims 2-4 of the instant application include the limitation of independent claim 1, Applicant respectfully submits that claims 2-4 are in condition for allowance. Furthermore, independent claims 11 and 21 include limitations similar to claim 1. Since claims 12-14 include the limitations of claim 11 and claim 22 includes the limitations of claim 21, Applicant respectfully submits that claims 12-14 and 22 are in condition for allowance.

Claims 10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ludtke in view of Brief. Applicant respectfully asserts that claims 2-4, 12-14, and 22 are not obvious under 35 U.S.C. § 103(a).

Claim 10 depends from independent claim 1, thereby including all the limitations of claim 1. Claim 1 includes the limitations "removing a work item of a plurality of work items from an enabled expansion bus schedule data structure;" "generating a coherency signal independent of said work item utilizing an expansion bus host controller in response to removing said work item from said enabled expansion bus schedule data structure;" and "reclaiming resources assigned to said work item whenever said coherency signal is generated." Nothing in Ludtke or Brief, alone or in combination, teaches these limitations. Ludtke teaches a system in which command frames are communicated from a requesting/listening device to a sourcing device in order to cause the sourcing device to perform one of a limited set of actions: initiating a data stream, terminating a data stream, or registering the capabilities of the device (see Ludtke, col. 4, line 24-col. 7, line 40), while Brief teaches a method and apparatus for performing a control transfer on a USB device. (see at least Brief, abstract).

Because claim 10 of the instant application includes the limitation of independent claim 1, Applicant respectfully submits that claim 10 is in condition for allowance. Furthermore, independent claim 11 includes limitations similar to claim 1. Since claim 20 includes the limitations of claim 11, Applicant respectfully submits that claim 20 is in condition for allowance.
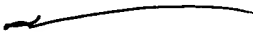
Conclusion

In conclusion, applicant respectfully submits that in view of the arguments and amendments set forth herein, the applicable rejections have been overcome.

If the Examiner believes a telephone interview would expedite the prosecution of this application, the Examiner is invited to contact Michael Mallie at (408) 720-8300.

Please charge any shortages and credit any overcharges to our Deposit Account No. 02-2666.

Respectfully submitted,
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Dated: _____, 2005

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